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<p><b>Tanza Water District</b>  <b>Registration Mark:</b></p> <p>OCT 27 2016</p> <p>MASTER COPY</p>	<p><b>Tanza Water District</b>  <b>Distribution Mark:</b></p> <p>NOV 02 2016</p> <p>CONTROLLED COPY</p>	<p>This document is updated and controlled if it bears the red "CONTROLLED COPY" stamp. Otherwise, please refer to the Document Control Center (DCC) for your updated copy.</p>

1.0 OBJECTIVE

The purpose of this procedure is to establish the appropriate process of water treatment to ensure the quality and potability of water supplied to the customers of Tanza Water District.

2.0 SCOPE

The procedure covers the method of preparation of chemical treatment to the testing if the parameters confirm to the standards set by the Philippine National Standard for Drinking Water

3.0 DEFINITION OF TERMS

- 3.1 Chlorine Dioxide (ClO<sub>2</sub>) – a heavy reddish-yellow gas ClO<sub>2</sub> used especially as a bleach and disinfectant.
- 3.2 Residual Test – water test/examination used to check the presence of bacteria in the water.
- 3.3 Chlorinator – an equipment used to distribute the chlorine dioxide to the water lines for a clean water supply.
- 3.4 Microbiological Test – refers to the studies and tests relating to very small living things such as bacteria and effects on people.
- 3.5 Physical and Chemical Test – checking the physical condition of the water according to the Philippine National Standards for Drinking Water (PNSDW).
- 3.6 Philippine National Standards for Drinking Water (PNSDW) – it is mandated by the Department of Health to minimize the risk of health hazards and to establish a safe and clean drinking water.

4.0 REFERENCE DOCUMENTS

- 4.1 Water Supply Control Procedure

5.0 RESPONSIBILITY AND AUTHORITY

- 5.1 The Division Head is in-charge and authorized for the process of the procedure.

6.0 PROCEDURE DETAILS

- 6.1 Chemical treatment

Process Flow	In-charge	Process Description	Records
<div>Start</div>			
<div>Request Chlorine</div>	Pump Operator	Shall request for the Chlorine supply to the Supply Office.  <i>Note:</i> Process of requesting shall be in accordance with Warehouse Control procedure	
<div>A</div>			

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<div><div>A</div><div>↓</div><div>Conduct Mixing of Chlorine</div><div>↓</div><div>Monitor Chlorine Level</div><div>↓</div><div>End</div></div>			
	Operator	Shall conduct mixing activity and record the mixing ratio using Chlorine Level Monitoring Report  <i>Note:</i> Mixing of chlorine shall be in accordance to the Chlorine Mixing Work Instruction.	Chlorine Level Monitoring Report
	Operator	Shall load chlorine and monitor such activity using Chlorine Level Monitoring Report.  <i>Note:</i> The operator shall monitor any adjustment made during the operation using Chlorine Level Monitoring Report.	Chlorine Level Monitoring Report

6.2 Chlorine Residual Test

Process Flow	In-charge	Process Description	Records
<div><div>Start</div><div>↓</div><div>Conduct Residual Test</div><div>↓</div><div>Record of Residual Testing</div><div>↓</div><div>Submission of Water Quality</div><div>↓</div><div>End</div></div>			
	Pump Operator	Shall conduct Residual Testing following the work instruction for residual testing.	
	Pump Operator	Shall record the result of residual test in the Chlorine Level Maintenance Report.	Chlorine Level Maintenance Report
	Pump Operator	Shall submit a Water Quality Monitoring Report to the Water Resources, Planning & Design Division Manager.	Water Quality Monitoring Report

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### 6.3 Physical, Chemical and Microbiological Testing of Water

Process Flow	In-charge	Process Description	Records
Start			
Schedule of Testing	WRPD Division Manager	Shall schedule the performance of water quality testing using the Testing Schedule Monitoring.	Testing Schedule Monitoring
Extraction of Samples	WRPD Division Manager	Shall extract samples from all pumping station according to the Testing Schedule Monitoring.  <i>Note:</i> 1) Shall follow the Work Instruction for Microbiological and Physical and Chemical Test.  2) A sampling of at least (2) concessionaires per pump station shall be extracted by the WRPDD Division Manager every month.	
Record of Extraction	WRPD Division Manager	Shall record the details of extraction in the Water Quality Monitoring Report.	Water Quality Monitoring Report
Submission of Samples	WRPD Division Manager	Shall prepare a Sample Transmittal Slip and forward the water samples to accredited testing agency.	Water Quality Monitoring Report
Recording of Samples	WRPD Division Manager	Record the result of the microbiological and physical and chemical test of water samples in the Water Quality Monitoring Report.  <i>Note:</i> All failed testing shall be treated in accordance with the Control of Non-Conforming Procedure.	Water Quality Monitoring Report
End			

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6.4 Reports

Reports	Frequency	Responsible
Pumping Station Monitoring Checklist	Daily	Operator
Pump Operation Checklist	Daily	Operator
Water Quality Monitoring	Daily	Operator
Microbiological Test	Monthly	External Source
Physical Chemical Test	Biannual	External Source

7.0 PERFORMANCE INDICATORS

7.1 The Division Head shall ensure that all specimen is properly labeled.

8.0 ATTACHMENTS AND FORMS

- 8.1 Water Quality Monitoring Report
- 8.2 Chlorine Level Maintenance Report
- 8.3 Testing Schedule Monitoring
- 8.4 Pumping Station Monitoring Checklist
- 8.5 Sample Transmittal Slip
- 8.6 Pump Operation Checklist

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Approved by:



## Date Updated:

Inspected by:

Noted by:

Approved by:





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**TANZA WATER DISTRICT**  
Tanza, Cavite

**PUMPING STATION MONITORING CHECKLIST**

Date: \_\_\_\_\_  
Time of Duty: \_\_\_\_\_  
Pumping Station: \_\_\_\_\_

Pumping Station Checklist	Reading	Time
Static Water Level		
Pumping Water Level		
Voltage		
Pump Capacity		
Current		
Flowmeter AM		
Flowmeter PM		
Water Tank AM		
Water Tank PM		
Generator Checklist	Remarks	Time
Fuel		
Oil		
Water		
Motor On		
Motor Off		
Duration		
Cleaning Control Panel		



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Pumping Station: \_\_\_\_\_

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Pumping Water Level		
Voltage		
Pump Capacity		
Current		
Flowmeter AM		
Flowmeter PM		
Water Tank AM		
Water Tank PM		
Generator Checklist	Remarks	Time
Fuel		
Oil		
Water		
Motor On		
Motor Off		
Duration		
Cleaning Control Panel		



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Time of Duty: \_\_\_\_\_  
Pumping Station: \_\_\_\_\_

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Pumping Water Level		
Voltage		
Pump Capacity		
Current		
Flowmeter AM		
Flowmeter PM		
Water Tank AM		
Water Tank PM		
Generator Checklist	Remarks	Time
Fuel		
Oil		
Water		
Motor On		
Motor Off		
Duration		
Cleaning Control Panel		



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Pump Capacity		
Current		
Flowmeter AM		
Flowmeter PM		
Water Tank AM		
Water Tank PM		
Generator Checklist	Remarks	Time
Fuel		
Oil		
Water		
Motor On		
Motor Off		
Duration		
Cleaning Control Panel		

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WRP-007-00



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**Sample Transmittal Slip**

Date: \_\_\_\_\_

Test Requested: \_\_\_\_\_

Sample Number	Location

Prepared by: \_\_\_\_\_

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

WRP-007-00



Republic of the Philippines  
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**Sample Transmittal Slip**

Date: \_\_\_\_\_

Test Requested: \_\_\_\_\_

Sample Number	Location

Prepared by: \_\_\_\_\_

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

WRP-007-00



Republic of the Philippines  
**TANZA WATER DISTRICT**  
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**Sample Transmittal Slip**

Date: \_\_\_\_\_

Test Requested: \_\_\_\_\_

Sample Number	Location

Prepared by: \_\_\_\_\_

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

WRP-007-00



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**Sample Transmittal Slip**

Date: \_\_\_\_\_

Test Requested: \_\_\_\_\_

Sample Number	Location

Prepared by: \_\_\_\_\_

Received by: \_\_\_\_\_

Date: \_\_\_\_\_





## PUMP OPERATION CHECKLIST

Time of Duty: \_\_\_\_\_

Date: \_\_\_\_\_

Pumping Station	Static Water Level		Pumping Water Level		Voltage		Current	
	Reading	Time	Reading	Time	Reading	Time	Reading	Time

### Water Treatment Checklist:

Pumping Station	Pressure Monitoring		Pump Water Level		Chlorinator & Chlorine Monitoring			Pump Capacity	
	Reading	Time	Reading	Time	Setting	Mixture	Time	gpm	time

Pumping Station No.

Time Prepared: \_\_\_\_\_

Pumping Station No.

Time Prepared: \_\_\_\_\_

Pumping Station No.

Time Prepared: \_\_\_\_\_

Pumping Station No.

Time Prepared: \_\_\_\_\_

Pumping Station No.

Time Prepared: \_\_\_\_\_

Pumping Station No.

Time Prepared: \_\_\_\_\_

Pumping Station No.

Time Prepared: \_\_\_\_\_

Pumping Station No.

Time Prepared: \_\_\_\_\_

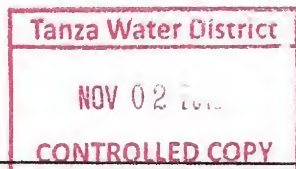
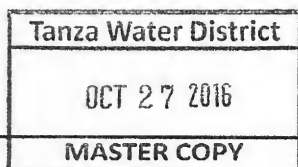
Pumping Station No.

Time Prepared: \_\_\_\_\_

Pumping Station No.

Time Prepared: \_\_\_\_\_

Remarks:



Accomplished by:

\_\_\_\_\_

Received by:

\_\_\_\_\_